SANTA CRUZ BIOTECHNOLOGY, INC.

HIV-1 p24 (24-4): sc-69728

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Human immunodeficiency virus (HIV) is a retrovirus that causes acquired immune deficiency syndrome (AIDS), a condition in humans in which the immune system begins to fail, leading to life-threatening opportunistic infections. HIV mainly infects vital cells in the human immune system such as helper T cells (specifically $CD4^+$ T cells), macrophages and dendritic cells. Two species of HIV infect humans: HIV-1 and HIV-2, with HIV-1 being the more virulent strain. p24 is a viral protein encoded by the HIV-1 GAG gene that provides structural elements of the virus along with p6, p7 and p17. Specifically, p24 makes up the viral capsid, p6 and p7 are the components of the nucleocapsid, and p17 provides a protective matrix.

REFERENCES

1. Barbouche, R.M., et al. 1999. False-positive HIV-1 p24 antigenemia with unusual pattern of neutralization. Arch. Inst. Pasteur Tunis 76: 11-12.
2. Barletta, J.M., et al. 2004. Lowering the detection limits of HIV-1 viral load using real-time immuno-PCR for HIV-1 p24 antigen. Am. J. Clin. Pathol. 122: 20-27.
3. Hou, J., et al. 2004. Preparation and characterization of the monoclonal antibody against HIV-1 p24 antigen. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 20: 699-701.

SOURCE

HIV-1 p24 (24-4) is a mouse monoclonal antibody raised against HIV-1 p24 Gag.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HIV-1 p24 (24-4) is available conjugated to agarose (sc-69728 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-69728 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-69728 PE), fluorescein (sc-69728 FITC), Alexa Fluor® 488 (sc-69728 AF488), Alexa Fluor® 546 (sc-69728 AF546), Alexa Fluor® 594 (sc-69728 AF594) or Alexa Fluor® 647 (sc-69728 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-69728 AF680) or Alexa Fluor® 790 (sc-69728 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HIV-1 p24 (24-4) is recommended for detection of Gag p24 of HIV-1 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Molecular Weight of HIV-1 p24: 24 kDa.

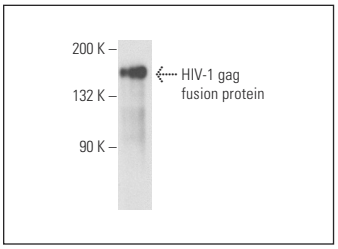
RESEARCH USE

For research use only, not for use in diagnostic procedures.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



HIV-1 p24 (24-4): sc-69728. Western blot analysis of human recombinant HIV-1 gag (p17/p24/p15).

SELECT PRODUCT CITATIONS

1. Titanji, B.K., et al. 2013. Protease inhibitors effectively block cell-to-cell spread of HIV-1 between T cells. Retrovirology 10: 161.
2. Singh, A., et al. 2014. Long-term suppression of HIV-1C virus production in human peripheral blood mononuclear cells by LTR heterochromatization with a short double-stranded RNA. J. Antimicrob. Chemother. 69: 404-415.
3. Henrick, B.M., et al. 2015. HIV-1 structural proteins serve as PAMPs for TLR2 heterodimers significantly increasing infection and innate immune activation. Front. Immunol. 6: 426.
4. Romani, B., et al. 2016. HIV-1 Vpr reactivates latent HIV-1 provirus by inducing depletion of class I HDACs on chromatin. Sci. Rep. 6: 31924.
5. Sithole, N., et al. 2018. DDX17 specifically, and independently of DDX5, controls use of the HIV A4/5 splice acceptor cluster and is essential for efficient replication of HIV. J. Mol. Biol. 430: 3111-3128.
6. Matsuda, K., et al. 2019. Benzolactam-related compounds promote apoptosis of HIV-infected human cells via protein kinase C-induced HIV latency reversal. J. Biol. Chem. 294: 116-129.
7. Ohainle, M., et al. 2020. TRIM34 restricts HIV-1 and SIV capsids in a TRIM5α-dependent manner. PLoS Pathog. 16: e1008507.
8. Khan, H., et al. 2020. HIV-1 Vpr antagonizes innate immune activation by targeting karyopherin-mediated NFκB/IRF3 nuclear transport. Elife 9: e60821.
9. Matsuda, K., et al. 2021. A therapeutic strategy to combat HIV-1 latently infected cells with a combination of latency-reversing agents containing DAG-lactone PKC activators. Front. Microbiol. 12: 636276.
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PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.